

WHAT IS CLAIMED IS:

1. (currently amended) A device for determining and controlling a bale length on a pick-up baler for agricultural harvested material, the device comprising:
 - a pick-up device;
 - a feed channel connected to the pick-up device;
 - a pressing channel connected to the feed channel;
 - a conveying device arranged downstream of the pick-up device for conveying the harvested material through the feed channel into the pressing channel, wherein a conveying action for the harvested material for conveying the harvested material from the feed channel into the pressing channel is carried out by a feed stroke that is controlled based on a degree of filling of the feed channel;
 - a pressing piston arranged within the pressing channel and movable reciprocatingly for compacting the harvested material by a pressing stroke;
 - a tying device for tying the finished bale with tying material;
 - at least one sensor detecting a bale growth resulting by compression of the harvested material conveyed by the feed stroke from the feed channel into the press channel and the subsequent pressing stroke, wherein the at least one sensor measures an actual length change of the bale after completion of the feed stroke and the subsequent pressing stroke of the pressing piston;
 - an electronic evaluation device connected to the at least one sensor, wherein the at least one sensor supplies ~~a bale growth value~~ the measured actual length change to the electronic evaluation device, wherein the ~~bale growth value~~ measured actual length change is converted into at least one of an averaged operand and a statistical operand for determining a required number of the feed strokes for approximately reaching a preset nominal bale length, wherein, after completion of the computed nominal number of feed strokes, the ~~binding~~ tying device is triggered.
2. (canceled)
3. (original) The device according to claim 1, further comprising a remote-control operating unit for presetting the nominal bale length.
4. (canceled)

5. (currently amended) The device according to claim 1, wherein the at least one sensor comprises a ~~thumb-wheel~~ starwheel contacting the bale and is adapted to record rotational movement sensors interacting with of the thumb-wheel starwheel.

6. (original) The device according to claim 1, wherein the at least one sensor is configured to measure the bale growth indirectly by measuring a length of removed tying material.

7. (currently amended) A method for determining and controlling a bale length on a pick-up baler for agricultural harvested material according to claim 1, the method comprising the steps of:

~~detecting bale growth steps~~ measuring an actual length change with at least one sensor ~~for , wherein each bale growth step that is defined by completion of a feed stroke moving harvested material from the feed channel into the pressing channel and a subsequent pressing stroke compressing the harvested material;~~

~~measuring with a sensor a bale growth for each bale growth step and sending the measured~~ actual length change values of the bale growth steps to an electronic evaluation device;

converting the measured actual length change values of the bale growth steps in the electronic evaluation device into at least one of an averaged operand and a statistical operand;

calculating with a selectable algorithm a number of nominal feed strokes in the electronic evaluation device based on the at least one averaged operand and statistical operand and at least a pre-selected nominal bale length;

comparing in the electronic evaluation device the number of actual feed strokes carried out in the bale growth steps with the number of nominal feed strokes and, upon reaching the number of nominal feed strokes, triggering the tying device.

8. (original) The method according to claim 7, wherein the step of calculating is repeated each time the bale growth has been measured.

9. (original) The method according to claim 7, wherein, in the step of calculating, parameters of properties of the harvested material are incorporated.

10. (original) The method according to claim 7, wherein, in the step of

calculating, machine data of the device are incorporated.

11. (original) The method according to claim 7, further comprising the steps of storing an initial number of feed strokes carried out after complete emptying of the pressing channel and before a first bale growth is measured and incorporating the initial number of feed strokes in the step of calculating the number of nominal feed strokes.